

Application Serial No.: 10/081,347

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Amendment dated: April 7, 2006

Response to Office Action dated March 15, 2005

REMARKS

Reconsideration of the application in view of the above amendments and following remarks is requested. Claims 19-39 have been cancelled as withdrawn claims directed to a non-elected invention. Claims 1, 4, 7, 10, 13, and 16 have been amended to recite the specific function of the polypeptides encoded by the present polynucleotides. Support for these amendments can be found at least at page 42, lines 8-15, particularly line 14-15 as well as the teachings further described below. No new matter has been added with these amendments. Claims 1-18 are currently pending.

I. Rejection under 35 U.S.C. § 112 (1st ¶) (Written Description)

The two remaining outstanding rejections in this case is a rejection of all the claims for lack of written description and enablement. In particular to written description, the Examiner notes at p. 3, lines 7-10 that "the claims do not require that the polypeptide possess any particular biological activity . . . thus, [the claim genus] is defined only by sequence identity." This leads to an alleged lack of written description for the full claim genus. Although Applicants do not agree with the Examiner's assessment of this issue, all independent claims have been amended to provide a functional limitation for the polypeptide encoded by the claimed polynucleotides, therefore overcoming the Examiner's concerns about the definition of the claimed genus and overcoming the rejection based on written restriction. This limitation is well supported in the present specification as outlined above. Furthermore, assays for such proliferative activity, albeit well known in the art, are extensively disclosed at p. 42, line 16 – p. 43, line 5. Accordingly, withdrawal of this rejection is respectfully requested.

II. Rejection under 35 U.S.C. § 112 (1st ¶) (Enablement)

Applicants also respectfully disagree with this rejection. In particular to enablement, the Examiner has stated that the presently claimed sequences do not share a common function. The present specification provides a common function – stimulation of proliferation of mesenchymally derived stem cells or their precursors – and the present amendment has placed this function within the claims. Additionally, the specification provides numerous assays at pages 42-43, using processes well within the purview of one of ordinary skill, to determine whether or not a particular sequence provides the proliferation stimulatory effects. Because these assays are well known processes, the specification provides sufficient enablement to allow practice of the entire scope of the present claims. The Examiner also asserts that regions of the protein critical for a biological function have not been identified, but as outlined above, at least two (if not

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more, based on the structural similarity provided in Figure 1) have been described in detail in the present specification. For example, at page 19, line 7-10, the heparin binding site for the zFGF5 molecule is provided. A second region is disclosed at page 16, line 35 through page 17, line 2 and page 17 line 17 and page 18, lines 15-16, which provides for a FGF conserved region of the molecule including a consensus sequence (disclosed as SEQ ID NO:36). One of ordinary skill in the art, seeking to practice the present invention, would understand that these regions may be involved in the biological function of the claimed molecules. In at least these ways, the specification provides sufficient guidance to make and use the full scope of claimed molecules.

On the basis of the above amendments and remarks, Applicants believe that each rejection has been addressed and overcome. Reconsideration of the application and its allowance are requested. If for any reason the Examiner feels that a telephone conference would expedite prosecution of the application, the Examiner is invited to telephone the undersigned at (206) 442-6627.

Respectfully Submitted,

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